



ecology and environment, inc.

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International Specialists in the Environment

PRELIMINARY ASSESSMENT

EXECUTIVE SUMMARY

TO: Alan Altur, U.S. EPA
FROM: Mark Wheeler, FIT *U.W.*
DATE: September 30, 1991
SUBJECT: Cosden Oil & Chem Co Site, Calumet City, Illinois
ILD091766410/F05-9104-012/FIL0266PA

The Cosden Oil & Chem Co site (Cosden) is an active chemical manufacturing facility located in Calumet City, Cook County, Illinois. The site is situated in the area known as 142nd and Paxton Avenue and is approximately 10 acres in size.

The Cosden site is owned by Cosden Oil and Chemical Company, a division of America Petrofina, Inc. The company produces polystyrene, high impact polystyrene, styrene-acrylonitrile polymers, and acrylonitrile-butadiene-styrene polymers at the site. Between 1970 and 1980 process wastewater at the site was released to a pretreatment system consisting of two unlined ponds. The ponds acted as settling basins for sludges suspended in the wastewater. After this pretreatment, wastewater was released to the Metropolitan Sanitary District of Chicago (MSD). In approximately 1969, a permit was obtained by the company from MSD to discharge process wastewater to the sanitary sewer system.

In approximately 1980 the unlined ponds were excavated and replaced with concrete basins that were constructed at the site. Approximately 400,000 pounds of sludge was removed from the ponds and disposed of off-site. The nature and extent of this clean-up operation is not known; however, file information indicates that soil borings were not

EPA Region 5 Records Ctr.



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made to determine whether surrounding soils had been contaminated by leaching from the ponds. On September 16, 1980, analysis of sludge samples from the unlined ponds, collected by the company and submitted to a private lab, revealed chromium (0.83 mg/kg), zinc (12.24 mg/kg), lead (3.97 mg/kg), copper (0.1 mg/kg), and nickel (0.1 mg/kg). Suspected leaching from the unlined ponds and past spills of styrene polymer at the site prompted Cosden Oil and Chemical Company to file a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 103(c) notification in June 1981. The extent of past spills at the site is not known.

Prior to 1984 the site operated under a Resource Conservation and Recovery Act (RCRA) Interim Status Part A Application as a hazardous waste storage facility. Polymerized styrene liquid wastes and sludges are currently stored in drums kept in an on-site drum storage area for periods less than 90 days and are then shipped off-site. The drum storage area is located on a concrete pad with a sump to contain spills. The site still maintains a RCRA permit as a generator of hazardous wastes.

The Cosden site also held several Illinois Environmental Protection Agency (IEPA) air permits until 1985, when these permits were withdrawn by the company. File information indicates that the site was in compliance with the permits for several years but the nature of the permits and reason for termination are not known.

A nonsampling site inspection was performed at the site by Ecology and Environment, Inc., Field Investigation Team (FIT) on June 24, 1985. FIT confirmed the location of the concrete storage basins during this inspection and obtained information concerning site history and on-site practices. An off-site reconnaissance of the site conducted by FIT on June 11, 1991, confirmed the location of the new concrete basins but could not determine the presence of wastewaters in the basins. At this time FIT did not observe a release of hazardous substances to surface waters or to the air and did not detect any odors.

Potential impacts to surface waters in the area of the site are limited to the Little Calumet River, which is adjacent to the north border of the Cosden site. The river is used for fishing and there are approximately 6 miles of wetlands located along the river, within 15

miles downstream of the site. Also, a wetland area located approximately 1/2 mile downstream of the site extends into a forest preserve known as Beaubrien Woods. Surface water runoff at the site is collected by the site's storm drainage system and released to the Little Calumet River. It is possible that surficial contamination potentially present in the soils near the former unlined settling ponds or in areas of past spills could enter this drainage system and flow into the Little Calumet River.

Groundwater in the area of the site is located 20 to 40 feet beneath the ground surface in glacial drift deposits. The nearest residential well is located approximately 1 1/2 miles southeast of the site and draws groundwater from a depth of approximately 45 feet. The majority of the population within a 4-mile radius of the site acquires drinking water from the city of Chicago's Lake Michigan surface water filtration systems. Because of the shallow depth to groundwater in the area and the past existence of unlined settling ponds at the site, it is possible that contaminants could migrate to groundwater beneath the site.

No residences, schools or day-care centers were observed within 200 feet of the site. Also, no odors or release of hazardous substances to the air have been directly observed by FIT, nor does file information indicate past air problems.

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